

Appln. No. 09/527,410
Atty. Doc. No. VKI-0034

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REMARKS

In an Office Action dated 14 October 2004, the Examiner rejects all pending claims 1-20 on various prior art grounds. Applicant respectfully disagrees with the Examiner's holding and submits in response that the claimed invention is not found in the relied-upon references taken singularly or in combination. Each of the respective prior art rejections are now addressed in turn.

Claims 1, 2, 5, 8, 9, 13, 15, 17, and 19 are rejected under 35 U.S.C. §102(b) as allegedly lacking novelty in view of U.S. Patent No. 3,289,027 to Jones. Claims 1 and 2 are independent and both recite a surge absorber without chips comprising, *inter alia*, lead terminals, with sealing spacers thereon, being adjustable within a cylindrical housing before being fixed airtightly thereto such that the distance between the discharge electrodes may be varied and set as desired. This limitation of claims 1 and 2 is simply not taught or even suggested by Jones. Thus the outstanding anticipation rejection is improper and must be withdrawn.

Jones teaches a voltage protector including two cup shaped metal end caps 1 and 2, an intermediate metal sleeve 3, two ceramic spacing cylinders 4 and 5, and two electrodes 10 and 11. Col. 1, lines 40-70 and Figure 1. The spacing cylinders 4 and 5 include inner ends fixed within the metal sleeve 3 at shoulders 9 and opposite ends which extend from the sleeve 3 and which are fixed at chamfered edges 8 of the respective end caps 1, 2. *Id.* The electrodes 10, 11 are fixed to the end caps 1, 2 and extend freely into and through the cylinders 4, 5 and into the sleeve 3. *Id.*

This configuration renders the Jones device *non-adjustable*. That is, in Jones: the electrodes 10, 11 are fixed to the end caps 1, 2; the end caps 1, 2 are fixed to the outer ends of the spacing cylinders 4, 5 at the chamfers 8; and the inner ends of the spacing cylinders 4, 5 are fixed to the sleeve 3 at the shoulders 9. Clearly, this configuration permits no adjustability of the cylinders nor of the resulting distance between the electrodes. Instead,

Appl. No. 09/527,410
Atty. Doc. No. YKI-0034

the Jones cylinders are rigidly fixed at the chamfers and shoulders and the distance between the electrodes is set and fixed as a function of the mounting of the electrodes, end caps, cylinders, and sleeve.

In this regard, the Examiner states in the Office Action, "The extent of penetration of the electrodes is limited by the chamfered caps as noted at col. 1, lines 55-65. This renders the distance as varied and set as desired up to that limit." Office Action, page 2 and 4.

The referenced passage of Jones is as follows:

"To limit the extent of penetration of the cylinders into the end caps 1 and 2 and sleeve 3, thereby to determine the spacing between the caps and the sleeve, the caps are chamfered as indicated at 8 and the sleeve is internally shouldered at 9." Col. 1, lines 58-62.

Notably, Jones does not discuss any variation of the position of the cylinders relative to the end caps nor relative to the sleeve. The only disclosure provided describes the cylinders as being wedged between the chamfers of the end caps and the shoulders of the sleeve. No other disposition or configuration is disclosed. Since the electrodes are fixed to the end caps, the mounting of the cylinders at the chamfers and at the shoulders results in a fixed disposition of the electrodes within the sleeve and a fixed, non-variable spacing therebetween. That is, no adjustability function is provided by Jones.

In the Office Action, the Examiner further states, "Applicant argues that the chamfered caps fixes the distance. This may be correct at the limit, but until that limit, there is adjustability since the device need not be employed at the limit." Office Action, page 4. Applicant notes first that the Examiner concedes that, at the "limit", the chamfered caps fix the distance between the corresponding electrodes. Next, Applicant notes that no citation is provided to support the Examiner's assertion that "there is adjustability since the device need not be employed at the limit." This is because no support is found in Jones for this proposition. Jones does not disclose *not* employing the spacing cylinders at the

Appl. No. 09/527,410
Atty. Doc. No. YKI-0034

shoulders of the sleeve on the one hand and at the chamfers of the end caps on the other. To the contrary, the Jones device is designed and specifically described as having the cylinders fixed at the shoulders and chamfers, as discussed. Particularly, Jones states that this configuration is required to set the distance of the end caps relative to the sleeve (and hence the distance of the electrodes relative to one another). See, discussion above. Further to this effect, Jones states:

"The cylinders 4 and 5 fit closely within the end caps 1 and 2 on the one hand and [closely] within the opposite ends of the sleeve 3 on the other hand..." Col. 1, lines 45-48.

and,

"At a position within the cylinder[,], *a shoulder d* of hexagonal or other polygonal cross-section *locates the electrode 10 centrally within the ceramic cylinder 4...*" Col. 2, lines 5-8. (Emphasis added.)

This latter quotation clearly enunciates the fixed nature of the electrodes within the sleeve as brought about by the shoulder-mounting of the cylinders.

Clearly, Jones does not disclose an adjustability of the cylinders relative to the end caps or sleeve and thus does not disclose adjustability of the distance between the electrodes within the sleeve. Therefore, necessarily Jones does not teach or suggest, "...lead terminals, with sealing spacers thereon, being adjustable within a cylindrical housing before being fixed airtightly thereto such that the distance between the discharge electrodes may be varied and set as desired", as recited in Applicant's claims 1 and 2.

Additionally, as set forth in previous submissions, Jones does not teach or suggest "a pair of lead terminals, each having a lead portion and a broadened tip forming a discharge electrode...[and] sealing spacers fitted and fixed on the lead portion of said lead terminal...", as recited in claims 1 and 2. (Emphasis added.) Instead, Jones discloses electrodes 10, 11 fixed to end caps 1, 2, where the electrodes extend freely from the end

Appln. No. 09/527,410
Att. Doc. No. YKJ-0034

caps through spacing cylinders 4, 5 and into an interior of a metal sleeve 3. Col. 1, lines 62-66. The spacing cylinders of Jones are not "fitted and fixed" on the electrodes as required by Applicant's claims 1 and 2.

Further, Jones does not disclose lead terminals with sealing spacers affixed thereon "inserted from open ends on both sides of said housing into an interior of said housing", as also required by claims 1 and 2. Since the cylinders of Jones are not affixed on the electrodes, clearly the reference does not teach this limitation.

Accordingly, for at least these reasons, claims 1 and 2 are novel over Jones; reconsideration and withdrawal of the outstanding §102 rejection is respectfully requested.

Claims 5, 8, 9, 13, 15, 17, and 19 are also rejected under §102 in view of Jones. However, these claims variously depend from novel independent claims 1 and 2 and are thus correspondingly novel over Jones; reconsideration and withdrawal of the relevant novelty rejections is respectfully requested.

Claims 1 and 2 are further rejected under §102 as allegedly lacking novelty in view Japanese Patent No. 11154585 to Nobuya. Here again, the relied-upon reference does not teach or even suggest, "...lead terminals, with sealing spacers thereon, being adjustable within a cylindrical housing before being fixed airtightly thereto such that the distance between the discharge electrodes may be varied and set as desired", as recited in Applicant's claims 1 and 2. Accordingly, the novelty rejection is improper and may not be maintained.

Nobuya teaches a surge absorber having a lead wire 11 welded to a sealing electrode 12 with a glass bead 13 fitted there around to form a sealing body 15. See, Abstract. A surge absorbing element and two of the sealing bodies 15 are inserted into and fixed to a glass tube 14, as shown in the drawings, to form the surge absorber. Nobuya makes no disclosure concerning varying the position of the sealing body 15 within the tube 14 to vary and set the distance between the electrodes 12. To the contrary, the reference exclusively shows the sealing bodies aligned with the outer edges of the glass tube 14. No

Appln. No. 09/527,410
Atty. Doc. No. YKI-0034

further orientation thereof is shown or described. Applicant notes that in the Office Action, the Examiner does not cite where the above-quoted feature of claims 1 and 2 is found in Nobuya. This is because, as discussed immediately above, Nobuya does not teach or suggest this claim limitation.

Further, claims 1 and 2 recite, "a pair of lead terminals, each having a lead portion and a broadened tip forming a discharge electrode, at least one broadened tip having a projected or patterned surface". This element is not found in Nobuya. Even if the sealing electrode 12 of Nobuya can be considered to be "a broadened tip", as claimed, the electrode 12 does not include a projected or patterned surface as further required by the claim. Instead, the electrode 12 simply has a flat surface discharge surface with no projections or patterns.

Additionally, Nobuya describes a "surge absorbing element" inserted in the spark gap with the sealing body 15. See, Abstract. This element is understood to be a common discharge chip or the like. Applicant's claims 1 and 2, however, require a surge absorber *without chips*.

For at least these reasons, Nobuya does not teach or even suggest all of the limitations of Applicant's claims 1 and 2. Accordingly, these claims are novel over Nobuya; reconsideration and withdrawal of the outstanding §102 rejection is respectfully requested.

Claims 1 and 2 are further rejected under 35 U.S.C. §103(a) as being obvious in view of U.S. Patent No. 3,513,516 to Odo as combined with U.S. Patent No. 2,923,798 to Gerth. These references, taken singularly or in combination, fail to teach or suggest each and every limitation of claims 1 and 2. Therefore, the outstanding §103 rejections are improper and may not be maintained.

As discussed at length above, claims 1 and 2 both require, "...lead terminals, with sealing spacers thereon, being adjustable within a cylindrical housing before being fixed

Appln. No. 09/527,410
Atty. Doc. No. YKI-0034

airtightly thereto such that the distance between the discharge electrodes may be varied and set as desired". Neither the Odo nor Gerth references teach or suggest this limitation.

As conceded by the Examiner, Odo does not teach a pair of scaling spacers nor a pair of lead terminals adjustable within a cylindrical housing, as recited in Applicant's claims 1 and 2. Office Action, page 3. It is also noted that Odo does not disclose "a pair of lead terminals, each having a lead portion and a broadened tip forming a discharge electrode, at least one broadened tip having a projected or patterned surface", as required by claims 1 and 2. Instead, Odo simply teaches stems 9, 16 with non-projected, non-patterned electrode sections 10 fixed thereon. See, e.g., col. 2, lines 1-27.

Gerth does not remedy these deficiencies of Odo. Gerth teaches a glass-enclosed electrical switching device including a glass body having opposite end portions 2 and 3 which receive electrodes 7, 8. Col. 2, lines 18-50; Figures 1-2. The electrodes 7, 8 are sealed to flares which are, in turn, sealed to the end portions 2, 3 of the glass body 1. *Id.* Gerth specifically teaches sealing the electrode/flare assembly to the glass body in the positions shown in Figure 1. Col. 2, line 69 – col. 3, line 1. Gerth does not describe the electrode/flare assembly as being positionally adjustable within the glass body.

With reference to Figures 3-4, Gerth discloses another configuration of the switching device which consists of a glass envelope 12 with flare members sealed to either end of the envelope 12 and electrodes 13, 14 sealed to the flare members and extending into the envelope 12. Col. 3, lines 39-47. The flare/electrode assembly is sealed to the envelope as discussed with regard to Figures 1-2, i.e., it is sealed in the exact position shown in the drawings; no variation of this position is disclosed. *Id.* Gerth describes the device of Figures 3-4 as permitting "adjustment of parts in the final structure." *Id.* This adjustability is provided by utilizing flare portions comprised of thin, pliable disc portions 20, 21 to which the electrodes 13, 14 are mounted. Col. 3, line 48 through col. 4, line 2. After assembly of the switching device, a slight mechanical adjustment of the electrode is possible. *Id.* That is, a slight movement of the electrode 13, 14 will result in a corresponding deflection (bending or warping) of the thin, pliable disc portion. *Id.* Once

Appl. No. 09/527,410
Atty. Doc. No. YKJ-0034

the position of the electrode is altered as desired, the disc portion is brazed or soldered to render it rigid thus permanently fixing the electrode in the new position. *Id.*

As mentioned, Applicant's claims 1 and 2 require, "...lead terminals, with sealing spacers thereon, being adjustable within a cylindrical housing before being fixed airtightly thereto such that the distance between the discharge electrodes may be varied and set as desired". This feature is not found in Gerth. Instead, the reference only teaches that the electrodes alone may be moved slightly via deformation of the flares after manufacture of the switching device. Moreover, Gerth does not teach or suggest a pair of lead terminals, each having a broadened tip, each tip having a projected or patterned surface, as recited in claims 1 and 2. Still further, Gerth discloses a glass enclosed switching device not a surge absorber without chips as recited in Applicant's claims.

For at least the reasons set forth above, Odo and Gerth do not teach or suggest each and every limitation of pending claims 1 and 2; thus *prima facie* obviousness is not established. Reconsideration and withdrawal of the relevant §103 rejections is respectfully requested.

Claims 1 and 2 are not further rejected or objected to and are thus believed to be allowable to Applicant.

Claims 3, 4, 6, 7, 10-12, 14, 16, 18, and 20 are further rejected under 35 U.S.C. §103(a) as being obvious in view of Jones as combined with one or more of Kozlowski, Hill, Lange, Zuk, and Harada. All of these claims variously depend from allowable independent claims 1 and 2 and are thus correspondingly allowable. Moreover, the claimed invention has been distinguished from these relied-upon references in Applicant's previous submissions which are now herein incorporated by reference. For at least these reasons, claims 3, 4, 6, 7, 10-12, 14, 16, 18, and 20 are non-obvious over the relied-upon references; reconsideration and withdrawal of the relevant §103 rejections are respectfully requested.

Appl. No. 09/527,410
Atty. Doc. No. YKJ-0034

For at least the reasons set forth herein, claims 1-20 are now believed to be allowable to Applicant. Withdrawal of all outstanding rejections and prompt issuance of a Notice of Allowance are respectfully requested.

Applicant hereby petitions for any necessary extension of time in order to have this Reply entered and considered.

The Examiner is invited to contact Applicant's attorneys at the below-listed telephone number concerning the present Reply or otherwise regarding the instant application.

Please charge any fees due and credit any amounts to Deposit Account No. 06-1130 maintained by Applicant's attorneys.

Respectfully submitted,

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